Supported ZPL II® Scripting Commands

Brady® i7500 Industrial Label Printer
PDC Certis C1-30 Thermal Patient ID Printer

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Brady Worldwide, Inc.
6555 West Good Hope Road
Milwaukee, WI 53223
bradyid.com

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1   Introduction

This document lists ZPL II commands and indicates which are supported in which Brady printers. Further information about ZPL scripting is outside the scope of this manual; refer to Zebra Technologies ZPL II documentation.

Brady fonts are used in place of ZPL fonts.

DPI Agreement

ZPL scripts are written for the dpi of the printer, so your existing script could be written for a different dpi than that of your Brady printer. Supported Brady printers automatically scale the label to match the dpi of the printer. In order for this to work, you must tell the printer what dpi your scripts use. See the printer manual to find the printer's ZPL dpi setting. The scaled labels may look slightly different than on a Zebra printer.

This automatic scaling is not meant to be used in combination with the ^MU command to change the print dpi. If both are used, the printer calculates the scale based on both settings.

2   Commands

The names of printers that support each command are abbreviated as follows:

- i7500 for Brady i7500 Industrial Label Printer
- C1-30 for Certis C1-30 Thermal Patient ID Printer

Supported Commands

Command	Name	Supported on		Notes
		i7500	C1-30	
^A	Scalable/Bitmapped Font	yes	yes	
^A@	Use Font Name to Call Font	yes	yes	Instead of specifying the font name, specify the font family. Downloaded fonts may appear slightly larger or smaller than when rendered on a Zebra printer. There may also be a small difference when aligning baselines for different sized fonts using the ^FT command. Lastly, the line spacing could differ by a small amount when using the ^FB command. All of these differences will vary depending on the font that is being used.
^B0	Aztec Bar Code	yes	yes	
^B1	Code 11 Bar Code	yes	yes	The Barcode may be smaller then Zebra's depending on your data.
^B2	Interleaved 2 of 5 Bar Code	yes	yes	
^B3	Code 39 Bar Code	yes	yes	Full ASCII for Code 39 is a function of the scanner rather than the barcode, the same as with Zebra printers.
^B4	Code 49 Bar Code	yes	yes	
^B5	Planet Code Bar Code	yes	yes	
^B7	PDF417 Bar Code	yes	yes	The barcode may appear smaller but always respects your parameters and scans the same.

Command	Name	Supported on		Notes
		i7500	**C1-30**	
^B8	EAN-8 Bar Code	yes	yes	Barcode acts as though ^CV is always set to Y.
^B9	UPC-E Bar Code	yes	yes	Barcode acts as though ^CV is always set to Y.
^BA	Code 93 Bar Code	yes	yes	
^BB	CODABLOCK Bar Code	yes	yes	The barcode may appear smaller but always respects your parameters and scans the same.
^BC	Code 128 Bar Code (Subsets A, B, and C)	yes	yes	• The barcode may appear smaller but always respects your parameters and scans the same. • Mode D uses font A instead of font 0 for interpretation text. • Interpretation text does not respect ^A for its font in modes, where Zebra would.
^BD	UPS MaxiCode Bar Code	yes	yes	
^BE	EAN-13 Bar Code	yes	yes	Barcode acts as though ^CV is always set to Y.
^BF	MicroPDF417 Bar Code	yes	yes	
^BI	Industrial 2 of 5 Bar Codes	yes	yes	
^BJ	Standard 2 of 5 Bar Code	yes	yes	
^BK	ANSI Codabar Bar Code	yes	yes	
^BL	LOGMARS Bar Code	yes	yes	
^BM	MSI Bar Code	yes	yes	
^BO	Aztec Bar Code	yes	yes	
^BP	Plessey Bar Code	yes	yes	The barcode height parameter has the range of 1-32000. The default is set by ^BY.
^BQ	QR Code Bar Code	yes	yes	All ^BQ commands are treated as a QR Code Model 2; Model 1 is not supported.
^BR	GS1 Databar	yes	yes	
^BS	UPC/EAN Extensions	yes	yes	Field Data (^FD) is limited to 2 digits for UPC/EAN 2 Digit Extension, and 5 digits for UPC/EAN 5 Digit Extension.
^BT	TLC39 Bar Code	yes	yes	

Command	Name	Supported on		Notes
		i7500	**C1-30**	
^BU	UPC-A Bar Code	yes	yes	Barcode acts as though ^CV is always set to Y.
^BX	Data Matrix Bar Code	yes	yes	The barcode may appear smaller but always respects your parameters and scans the same.
^BY	Bar Code Field Default	yes	yes	
^BZ	POSTAL Bar Code	yes	yes	IntelligentMail uses font A instead of Font 0 for interpretation text.
^CC	Change Caret	yes	yes	
~CC	Change Caret	yes	yes	
^CD	Change Delimiter	yes	yes	
~CD	Change Delimiter	yes	yes	
^CF	Change Alphanumeric Default Font	yes	yes	
^CI	Change International Font/Encoding	yes	yes	Values supported are: 0-13, 27-31, and 33-36.
^CT	Change Tilde	yes	yes	
~CT	Change Tilde	yes	yes	
^CV	Code Validation	yes	yes	
^CW	Font Identifier	yes	yes	Instead of specifying the font name, specify the font family. This is only required when using your own fonts (not system fonts).
^DF	Download Format	yes	yes	
~DG	Download Graphics	yes	yes	
^FB	Field Block	yes	yes	
^FC	Field Clock	yes	yes	
^FD	Field Data	yes	yes	
^FH	Field Hexadecimal Indicator	yes	yes	
^FN	Field Number	yes	yes	
^FO	Field Origin	yes	yes	Auto justification defaults to left justification.
^FP	Field Parameter	yes	yes	

Command	Name	Supported on		Notes
		i7500	**C1-30**	
^FR	Field Reverse Print	yes	yes	When using reverse print, you may see a difference in the printed output if your script has two overlapping rounded rectangles with text in between the two rectangles in the script. To avoid this, put all rounded rectangles first in your script followed by any text.
^FS	Field Separator	yes	yes	
^FT	Field Typeset	yes	yes	• Baseline concatenation between two elements may not match exactly with Zebra. • Auto justification defaults to left justification.
^FV	Field Variable	yes	yes	
^FW	Field Orientation	yes	yes	Auto justification defaults to left justification.
^FX	Comment	yes	yes	
^GB	Graphic Box	yes	yes	
^GC	Graphic Circle	yes	yes	
^GD	Graphic Diagonal Line	yes	yes	
^GE	Graphic Ellipse	yes	yes	
^GF	Graphic Field	yes	yes	
^GS	Graphic Symbol	yes	yes	
^IM	Image Move	yes	yes	
~JA	Cancel All	yes	yes	
^JM	Set Dots per Millimeter	yes	yes	
~JX	Cancel Current Partially Input Format	yes	yes	
^KD	Select Date and Time Format (for Real Time Clock)	yes	yes	
^KL	Define Language	yes	yes	
^KN	Define Printer Name	yes	yes	
^LH	Label Home	yes	yes	
^LL	Label Length	yes	yes	

Command	Name	Supported on		Notes
		i7500	**C1-30**	
^LR	Label Reverse Print	yes	yes	When using reverse print, you may see a difference in the printed output if your script has two overlapping rounded rectangles with text in between the two rectangles in the script. To avoid this, put all rounded rectangles first in your script followed by any text.
^LT	Label Top	yes	yes	
^MC	Map Clear	yes	yes	
^MD	Media Darkness	yes	yes	Allowed range is from -30 (lightest) to 30 (darkest).
^MM	Print Mode	yes	no	This command is processed, but you cannot set it differently than the setting on the printer. So for now, the end result is the same as the command being unsupported.
^MU	Set Units of Measurement	yes	yes	
^PM	Printing Mirror Image of Label	yes	yes	
^PO	Print Orientation	yes	yes	
^PP	Programmable Pause	yes	yes	i7500 responds the same as Zebra. For C1-30, this puts the printer in stop mode and ejects all printed labels from the printer. All commands after are ignored until the printer is taken out of stop mode with ~PS.
~PP	Programmable Pause	yes	yes	i7500 responds the same as Zebra. For C1-30, this puts the printer in stop mode and ejects all printed labels from the printer. All commands after are ignored until the printer is taken out of stop mode with ~PS.
^PQ	Print Quantity	yes	yes	
^PR	Print Rate	yes	no	
~PR	Application Reprint	yes	yes	
~PS	Print Start	yes	yes	i7500 responds the same as Zebra. For C1-30, ~PS takes the printer out of stop mode.

Command	Name	Supported on		Notes
		i7500	C1-30	
^PW	Print Width	yes	yes	
~SD	Set Darkness	yes	yes	
^SF	Serialization Field (with a Standard ^FD String)	yes	yes	Any data produced by ^FC will not be modified by the ^SF command, and will be treated as alphanumeric characters.
^SL	Set Mode and Language (for Real-Time Clock	yes	yes	
^SN	Serialization Data	yes	yes	Any data produced by ^FC will not be modified by the ^SN command, and will be treated as alphanumeric characters.
^SO	Set Offset (for Real-Time Clock)	yes	yes	
^ST	Set Date and Time (for Real-Time Clock)	yes	yes	
^TB	Text Blocks	yes	yes	The last line of text is not printed if the block height would cut it in half.
~WC	Print Configuration Label	yes	yes	
~WL	Set LEAP Parameters	yes	yes	
^XA	Start Format	yes	yes	
^XB	Suppress Backfeedq	yes	no	
^XF	Recall Format	yes	yes	
^XG	Recall Graphic	yes	yes	
^XZ	End Format	yes	yes	

Unsupported Commands

The following table lists ZPL commands that are not supported.

Commands not listed in the table that are also not supported:

- ZPL RFID commands
- Wireless commands (except for ~WL which is included in the table of supported commands above)

Unsupported commands included in your script are ignored.

Command	Name	
^CM	Change Memory Letter Designation	Not supported
^CN	Cut Now	Not supported
^CO	Cache On	Not supported
^CP	Remove Label	Not supported
~DB	Download Bitmap Font	Not supported
~DE	Download Encoding	Not supported
~DN	Abort Download Graphic	Not supported
~DS	Download Intellifont (Scalable Font)	Not supported
~DT	Download Bounded TrueType Font	Not supported
~DU	Download Unbounded TrueType Font	Not supported
~DY	Download Objects	Not supported
~EG	Erase Download Graphics	Not supported
^FL	Font Linking	Not supported
^FM	Multiple Field Origin Locations	Not supported
~HB	Battery Status	Not supported
~HD	Head Diagnostic	Not supported
^HF	Host Format	Not supported
^HG	Host Graphic	Not supported
^HH	Configuration Label Return	Not supported
~HI	Host Identification	Not supported
~HM	Host RAM Status	Not supported
~HQ	Host Query	Not supported
~HS	Host Status Return	Not supported
^HT	Host Linked Fonts List	Not supported
~HU	Return ZebraNet Alert Configuration	Not supported
^HV	Host Verification	Not supported

Command	Name	
^HW	Host Directory List	Not supported
^HY	Upload Graphics	Not supported
^HZ	Display Description Information	Not supported
^ID	Object Delete	Not supported
^IL	Image Load	Not supported
^IS	Image Save	Not supported
^JB	Initialize Flash Memory	Not supported
~JB	Reset Optional Memory	Not supported
~JC	Set Media Sensor Calibration	Not supported
~JD	Enable Communications Diagnostics	Not supported
~JE	Disable Diagnostics	Not supported
~JF	Set Battery Condition	Not supported
~JG	Graphing Sensor Calibration	Not supported
^JH	Early Warning Settings	Not supported
^JI	Start ZBI (Zebra BASIC Interpreter)	Not supported
~JI	Start ZBI (Zebra BASIC Interpreter)	Not supported
^JJ	Set Auxiliary Port	Not supported
~JL	Set Label Length	Not supported
~JN	Head Test Fatal	Not supported
~JO	Head Test Non-Fatal	Not supported
~JP	Pause and Cancel Format	Not supported
~JQ	Terminate Zebra BASIC Interpreter	Not supported
^JS	Sensor Select	Not supported
~JS	Change Backfeed Sequence	Not supported
^JT	Head Test Interval	Not supported
^JU	Configuration Update	Not supported
^JW	Set Ribbon Tension	Not supported
^JZ	Reprint After Error	Not supported
~KB	Kill Battery (Battery Discharge Mode)	Not supported
^KP	Define Password	Not supported
^KV	Kiosk Values	Not supported
^LF	List Font Links	Not supported
^LS	Label Shift	Not supported

Command	Name	
^MA	Set Maintenance Alerts	Not supported
^MF	Media Feed	Not supported
^MI	Set Maintenance Information Message	Not supported
^ML	Maximum Label Length	Not supported
^MN	Media Tracking	Not supported
^MP	Mode Protection	Not supported
^MT	Media Type	Not supported
^MW	Modify Head Cold Warning	Not supported
^NC	Select the Primary Network Device	Not supported
~NC	Network Connect	Not supported
^ND	Change Network Settings	Not supported
^NI	Network ID Number	Not supported
~NR	Set All Network Printers Transparent	Not supported
^NS	Change Wired Networking Settings	Not supported
~NT	Set Currently Connected Printer Transparent	Not supported
^PA	Advanced Text Properties	Not supported
^PF	Slew Given Number of Dot Rows	Not supported
^PH	Slew to Home Position	Not supported
~PH	Slew to Home Position	Not supported
~PL	Present Length Addition	Not supported
^PN	Present Now	Not supported
~RO	Reset Advanced Counters	Not supported
^SC	Set Serial Communications	Not supported
^SE	Select Encoding Table	Not supported
^SI	Set Sensor Intensity	Not supported
^SP	Start Print	Not supported
^SQ	Halt ZebraNet Alert	Not supported
^SR	Set Printhead Resistance	Not supported
^SS	Set Media Sensors	Not supported
^SZ	Set ZebraNet Alert	Not supported
~TA	Tear-off Adjust Position	Not supported
^TO	Transfer Object	Not supported
^WD	Print Directory Label	Not supported

Command	Name	
~WQ	Write Query	Not supported
^XS	Set Dynamic Media Calibration	Not supported
^ZZ	Printer Sleep	Not supported